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Cycling into Headwinds: Analysing mobility practices that inhibit sustainability

Scheurenbrand, K., Parsons, E., Cappellini, B., & Patterson, A. (2018). Cycling into Headwinds: Analysing mobility practices that inhibit sustainability. Journal of Public Policy and Marketing.

Using the example of cycling we contribute to public policy debates surrounding sustainability. We employ practice theory to shift the debate away from consumer choice and agency to examine instead why sustainable practices are not always available to consumers. Therefore, rather than asking the question “why don’t people cycle?” we ask “why is the practice of cycling not thriving?” Practice theory focuses on material, meanings and competences as making up a practice positing that it can only thrive and grow once these elements come together. By looking at how practices compete between each other for the same set of elements we can examine how some practices (i.e. driving, schooling, policing) come to dominate or inhibit others (cycling). In terms of the theme of this special issue then instead of excavating anti-consumption as a pre-cursor to practices (i.e. a choice not to engage in), by opening out practices we examine the mechanisms through which this choice is restricted.

Key words: Practices, Practice Theory, Cycling, Sustainable Consumption, Policy

Introduction

In this paper we shift the debate entirely away from consumer choice and agency in sustainable consumption to examine instead why sustainable practices are not always *available* to consumers. To date debates on anti-consumption have largely focused on ‘reasons *against* consumption’ (Lee et al. 2009, p. 145), making the study of not consuming

mainly a matter of consumers' deliberate attitudes towards avoiding, boycotting and abstaining from consumption (Lee et al., 2013, Kozinets, et al. 2010). Cherrier et al. (2011, p1757) have also explored the idea of 'incidental non-consumption' as resulting 'from choice towards a preferred alternative'. We would like to unsettle this debate by asking what if there is no preferred alternative available? What if there is limited or no opportunity to consume sustainably? This contextual or systemic approach to sustainable consumption may also help in understanding some of the reasons for the 'green gap' (Black, 2010, p. 404) in which consumers profess sustainable beliefs and values and yet continue to consume in unsustainable ways (see for example cases of recycling, Hargreaves, 2011 and cycling, Claudy and Peterson, 2014). Here a range of consumer studies have critiqued the individualising of consumer responsibility (Evans, 2011, Shove et al., 2012, Steward, 2015). Policy incentives following the so-called ABC-Mantra (A for attitude, B for behaviour and C for choice) have been particularly criticised for their over reliance on mindset and deliberate action (Shove, 2010).

Our theoretical approach looks at this problem from a different viewpoint. Our focus on practices as opposed to consumers deprotagonises consumers seeing them instead as 'locked' (Newell et al., 2015, p.537) into unsustainable patterns (and also locked out of sustainable patterns) as a consequence of practice arrangements (Schatzki, 1996, 2013, 2016, Shove, 2010, Shove et al. 2012, Shove and Spurling, 2013, Watson 2013). Within such a framing, consumers are viewed as recruited to practices or carriers of practices (Shove and Pantzar 2005) as such they are no longer the key actors in the story. This view also allows a role for the unreflexive, routine and habitual nature of much consumer behaviour (Hill et al. 2014).

We also argue that it is not enough to focus on a single practice but rather that we need to understand the relations *between* practices in order to grasp how and why some practices thrive and come to dominate while others struggle. While a series of studies within consumer research have explored the synergetic dynamics *within* the various elements of practices (Gram-Hannssen, 2011; Magaudda, 2011; Arsel and Bean, 2013; Woermann and Rokka, 2015) few as yet have fully explored the dynamics of relations between practices. To use Nicolini's (2009a) terminology, these studies provide good examples of 'zooming in' to a practice at the micro-level to explore its internal dynamics. But relatively few studies have 'zoomed out' to explore how practices themselves intersect, compete and potentially clash with one another. This is because they look at practices that are already well established and un-contested. Thus, we argue to fully explore a practice that is marginalized (and indeed struggling to develop) we need to explore both how elements *within* the practice (in our case urban cycling) might intersect but also exploring the relations *between* urban cycling and other related practices (such as driving, schooling and policing). This second strand of our approach allows us to explore the politics of practices i.e. how some come to dominate and others are marginalised.

Consequently, this paper addresses the following questions:

- 1) Why might sustainable practices (such as urban cycling) fail to thrive?
- 2) What are the implications of such an approach for the design of policy surrounding sustainable consumption?

The paper begins by exploring the reasons given in the literature to date for nonparticipation in cycling and the suggestions made to remedy this. Here scholars are already calling for a much more integrated systemic approach to understanding cycling. Based on this call we then put forward our argument for studying cycling using a practice based approach. We follow

this with more detail on integrative practices, practice bundles and action hierarchies to help elucidate our approach to understanding the relations between practices.

Nonparticipation in Urban Cycling: An Overview of the Literature

Popular quantitative studies of cycling (Martens, 2004, Pucher and Dijkstra, 2000) perpetuate a dominant belief that external factors such as infrastructure and cycling facilities such as flat surfaces and well connected and segregated cycle paths are ‘key components’ (Larsen and El-Geneidy, 2011, p. 172) in increasing cycling participation (Kritzek and Roland, 2005, Telfer et al. 2006). However, studies on the ‘barriers to cycling’ (Horton et al., 2007) show that individual perceptions of fear, safety, experience, distance and comfort could equally impact negatively on transport mode choice (Martens, 2004, Pucher and Dijkstra, 2000, Horton, 2007, Pucher and Buehler, 2008). As a result, studies have claimed that internal and external factors should both be taken into account; as they are said to have reciprocal impact upon each other and hence on the decision of people to cycle (Martens, 2004, Pucher and Dijkstra, 2000, Horton et al., 2007, Pucher and Buehler, 2008, Heinen et al., 2011, Nilsson and Küller, 2000, Susilo et al. 2012). Capturing people’s transport choices mainly through rational categories, the quantitative field is critiqued for their ‘preconceived’ (Spinney, 2009, p.818) ideas about what cycling ‘should be’ (p.818). In recognising such a limitation, some (Buehler and Dill, 2016) have called for a more nuanced and in-depth understanding of cycling in various contexts, using different methodological tools. This work calls for studies which link holistic infrastructural information on ‘bikeway networks’ to cycling levels, with networks including cycle lanes, tracks and paths, neighbourhood traffic calming, and accommodations for cyclists at intersections. Work has also explored relationships between cycling policies and infrastructure (Dill, 2009; Pucher, Dill and Handy, 2010). Studies seem to reinforce the

centrality of public policy in cycling promotion. However, this work also underlines the need for associated interventions which cover infrastructure and pro-bicycle programs, supportive land use planning, and restrictions on car use (Pucher, Dill and Handy 2010).

Qualitative cycling scholars begin to question the ‘static, undifferentiated account of people’s understandings and experiences’ (Skinner and Rosen, 2007, p.84) of quantitative research.

Spotswood and Tap (2011) for example argue that the promotion of cycling has to go beyond common cognitive appeals, they also observe that perceived barriers to cycling are too narrow to understand the use –and lack of bicycle use (Skinner and Rosen, 2007). Parkin et al. (2007) further argue that cycling research should ‘...encompass some of the wider, more cultural, issues that may affect the choice for the bicycle’ (p.80). The use of cultural insights is intended to increase acceptability of policy programmes, as it is more likely to be perceived as authentic and credible (Bye, 2003) and as such facilitate voluntary behavioural change (Horton et al., 2007). As Horton et al. (2007) suggest, ‘attempts to promote cycling could be much more effective if they incorporated greater understanding of cycling’s complexity and diversity, even within a single society’ (p.7). Dalpian et al’s (2015) study of Critical Mass¹ explores the shared as well as individual meanings of cycling held by this collective. In doing so they take a more holistically informed approach to looking at cycling exploring the significance of meanings, beliefs and objects (the bike) in constituting cycling as a counterhegemonic practice. Studies of this type have started to make inroads into a culturally embedded, fully embodied and action-oriented view of cycling, but more work is needed We think that a practice theory approach goes some way to addressing this.

Studying Urban Cycling Using a Practice-Based Approach

¹ Critical Mass is a global social movement involving direct action events where cyclists meet at a set time and location to cycle together through city streets, thus reclaiming them from motorists (Blickstein and Hanson, 2001; Carlsson, 2002; Furness, 2007).

Building on the work reviewed above we put forward a practice-based approach as appropriate in integrating both the cultural and material and infrastructural elements that are necessary to understand cycling. As a vital part of the practice's existence, infrastructure is not treated as 'simply the backdrop or context to where the real action is' (Latham and Wood, 2015, p.303) but appreciates that the action is as much made because of the infrastructure and material arrangements as it happens within them (Schatzki, 2010). Moreover, practice-based research emphasizes the situated 'bodywork' (Aldred, 2013, p.46) as integral to the normative, material and semiotic aspects of practices, and this bodywork is central to urban cycling (Spinney, 2011).

The notion that 'social relations are spatially organized' (Urry 2007, p.34) becomes crucial because *places* contain collective memories and determined forms of moving through which a community expresses possible dominant behaviours. Thus, encountering a different way of moving from the one that a community has practiced over years can potentially evoke resistance (Urry, 2007). Urban cycling as a statistically underperformed practice is thus likely perceived as 'a new old thing' (Vivanco, 2013). Despite car driving being the 'predominant form of mobility...[subordinating] the other mobility-systems of walking, cycling...' (Urry, 2007, p.85), the relationships between mobility practices has largely been overlooked. While abundant literature exists that analyses the dominance of automobility (Furness, 2010, Bohm et al., 2006, Merriman, 2007, Conley and Maclaran, 2009, Mees, 2010) only a few studies juxtapose urban cycling and car driving by explicitly questioning the taken for granted marginalised position of the former within the domination of the latter (Fincham, 2006, Latham and Wood, 2015). Studies on urban cycling have indicated the unequal allocation of resources among transportation practices but have not further conceptualized the mechanics through which such allocation happens and how urban cycling is held in its marginalised position.

As we discuss above, sociologists call for a more sustained focus on the systemic issues which prevent cycling from becoming a dominant mode of transport (Horton et al., 2007, Spinney, 2009). In this respect practice-based approaches seem promising as they explore ‘orderly materially mediated doing[s] and saying[s] (‘practices’) and their aggregation’ (Nicolini and Monteiro, 2017, p. 111). Although these studies have attracted growing interest in management studies and consumer research they differ in their conceptualization of what constitutes a practice. Nevertheless, authors insist that practice-based studies share fundamental commonalities (Nicolini and Monteiro 2017; Schatzki, 2016, Shove et al. 2012). Firstly, such practice-based approaches share the orientation that ‘social and organisational life stem from and transpire through the real time accomplishments of ordinary activities’ (Nicolini and Monteiro 2017, p.110). In other words, practice studies believe that the world is made of practices and hence committed to a ‘flat ontology’. Flat means that practices reject the idea of a single agentic entity, since all the elements that comprise the practice are equally important to its existence. Secondly, and consequently, the commitment to this flat character of practices decentralizes agency in that non-human and material aspects as well as embodied knowledge are as integral to the practice as the actual consumer. A practice approach therefore ‘deprotagonists’ the consumer and his identity work (Warde 2005). Thirdly, a flat ontology highlights how practices are carried out through space and time in a *here and now* that is a fundamental part of the formation, maintenance, and disappearance of a practice (Shove and Pantzar, 2007). Inspired by Shove and Pantzar’s (2007) examination of how practices capture and retain practitioners, (and Shove, Pantzar and Watson’s 2012 later observations of practices as recruiting carriers), we look at the ‘social structuring of opportunity’ (p.164) in which a practice is encountered by individuals, exposures and previous experiences and history of the practice. As the practice under study is a marginalised one, we are also interested in what Shove and Pantzar (2007) call ‘parallel process including

those of resistance and defection' (p.164).

Integrative Practices, Practice Bundles and Action Hierarchies

Since the physicality of bodywork is a central aspect of cycling (Spinney, 2011), we follow one of the most popular definitions of practice in consumer research by Schatzki (1996), who places emphasis on embodied knowledge also called 'attunement and understandings' (Schatzki, 2001, p.69). He defines a practice as a 'temporally and spatially dispersed but organized nexus of doings and sayings...[these] doings and sayings are linked through (1) practical understandings, (2) rules, (3) teleoaffective structure (ends purposes beliefs and emotions) and (4) general understandings' (p. 89). Schatzki's concept of practices invites the researcher to examine not only a single practice but to capture relationships among 'bundles' of practices. Such bundles are characterised by action hierarchies (Schatzki, 2012), in which basic activities add up to hierarchical organized activities that again in their accumulation build practices that in their bundle constitute larger practices and so on. Peddling for example is such a basic activity in cycling, which occurs and is performed in various integrative cycling practices, such as race-cycling, BMX riding etc. It is an essential sub practice of cycling but it exclusively expresses that someone knows how to peddle on a bike, which easily can be done in a spinning lesson without further knowledge of how to cycle on the road. Peddling then needs to bundle up with other sub-practices like breaking, parking, storing, ringing the bell, reacting within traffic linked through the above cited features in order to become urban cycling. Beyond, we move to then higher-level practices like working, schooling, running errands for even higher practices and so forth. In looking at practices this way, it becomes clear that single practices encompass a range of activities which at the same

time intersect with other practices of daily life and can thus not be analysed in isolation. In studying relationships amongst practices, we can understand not only the evolving process of an emerging practice, but also its ‘social life’ (Schatzki, 2016, p. 23), which transpires from the hierarchical relations of bundles of practices.

The bundle perspective underpins the importance of clearly delineating urban cycling from other cycling practices because its basic activities (or sub-practices) are completely different from sportive race cycling or leisure pursuits. Performing urban cycling, certain bodily and mental know-how are needed to handle the bicycle and one’s own body within traffic in which practitioners –ideally- follow rules and norms, act and react to other traffic participants. It also implies purpose, i.e. to move from A to B in a defined time span mostly imposed by other practices such as working, shopping etc., that require parking the bicycle at the destination. The purpose of getting around quickly in performing such ‘higher level’ (Schatzki, 2012, p.3) practices requires the cyclist most likely to carry stuff around, such as clothes for changing, documents, shopping bags etc. Hence the characteristic of urban bicycles is their utility, offering the ability to carry items in baskets or paniers with stable frames, comfortable seats and grippy wheels. Safety is foregrounded, whereas speed is less emphasised through gears with fewer levels. Features of race cycling in contrast are entirely different. Instead of rolling along at an inner-city pace, race cycling is done on highways or interurban roads, where the co-existence with cars is of high risk. Competences surrounding how to behave outside the city in this context are therefore different to those within the city in that changing lanes is not required as much as in city traffic as stop and go is not given. Therefore, the interaction through hand signals with cars is less required, in fact would be unsafe in maintaining concentration and balance at high speed. The purpose of race cycling is speed in training and competitions –not transportation, which, in turn, requires different

material equipment. Hence light weight bicycles with special gears and special clothes are at play, yet the overall quality –and prices- of the race bikes are high end. As the purpose of this practice is sportive, there is no need to park the bicycle unsupervised as in the case of urban cycling. The same distinctions can be made for mountainbiking. The competence of jumping, gliding and breaking down rocky, muddy, or dusty soil is not necessary during urban cycling. Consequently, the material necessary for mountainbiking needs to support the activity of balancing and controlling steep paths. Hence, wide handlebars are requisite to perform the practice. Traffic rules do not apply in open nature, hence someone who passionately bikes mountains, is not necessarily able to ride within city traffic.

Although Schatzki's definition is perhaps the most insightful for exploring cycling, Shove et al. (2012) offer a succinct approach in categorizing the necessary elements of a practice in boiling these down to: material, competence and meaning. *Material* concerns 'things, technologies, tangible physical entities and the stuff of which objects are made' (Shove et al. 2012, p.14). *Competence* includes 'skill, know-how and technique' (Shove et al. 2012, p.14) while *meaning* categorizes 'symbolic meanings, ideas and aspirations' (Shove et al. 2012, p.14). Merging Schatzki (1996; 2012) and Shove's et al. (2012) frameworks to understand the marginalized nature of urban cycling within the bundle of urban moving practices, we grouped the elements that are necessary for the existence of urban cycling into the following schema:

- *Material Elements*: we looked for bodies, vehicles and bicycles, facilities like storage opportunities (bike racks and buildings), access to private and public buildings like shopping malls etc. We looked at the infrastructure in the city; the place and space

assigned to the different urban transportation practices. We looked for bike shops providing bikes, accessories and repair services

- *Competence*: we looked for skills and physical abilities of riding bicycles, practical understandings of urban moving, rules and norms in traffic. We looked for how bodies move, how bicycles are moved and parked in the street. If and how rules on paper are actually performed in traffic.
- *Meanings*: apart from symbolic meanings we examined the teleoaffective structures of urban cycling entailing: ‘a set of ends that participants should or may pursue, a range of projects that they should or may carry out for the sake of these ends and a selection of tasks that they should or may perform for the sake of those projects.’ (Schatzki, 2001, p.80). Furthermore we grouped under meanings general understandings of urban cycling and urban moving, which ‘are expressed in the manner in which people carry out projects and tasks’ (Schatzki, 2001, p.86).

This hybrid framework was used to analyse urban cycling in relation to other practices of urban moving, contributing to our limited understanding of how unsustainable ways of moving are still the ‘predominant form of mobility...[subordinating] the other mobility-systems of walking, cycling...’ (Urry, 2007, p.85). We know little about how this ‘subordination’ comes about and how multiple practices negotiate their existence in a dynamic world that impacts on consumption.

Methodology

The present research is based on a practice-based ethnography in Las Palmas carried out by the first author. The study is based on two periods of fieldwork of 4 months and 8 months

respectively over a three-year period. Eminent practice scholars suggest that ethnography is the most appropriate methodology for practice-based research (Halkier et al. 2011). Schatzki (2012) for example argues that it is only through ethnography that we can ‘uncover [the] ethereal’ (p.24) nature of practices as we engage with urban cyclists to unravel the ‘action hierarchies’ (p.24) of sayings and doings that compose practices. Nicolini (2009b, 2012, 2017) proposes a rhizomatic strategy to collect and represent data to follow through with these aims. He characterizes practices as relational and indeed ‘rhizomatic’, i.e spread out like roots popping up at the surface while having connections and links underneath the surface only to pop up somewhere else. What makes this characterization special is that it allows us to trace practices in unexpected ways, tracing relationships even though these might be invisible at first sight. Insights of one practice may lead to insights about another practice, which in turn leads to insights about another practice and so on. Nicolini in this regard postulates that ‘we need to develop a variety of approaches for appreciating and representing practice in all its complexity...identifying methods that capture different aspects of practice’ (p. 209). As we follow this rhizomatic approach, we make use of multiple methods to access these ‘practices spread out over space and time’ (Schatzki, 2012, p.24). Unstructured (group) interviews, observation, participant observation and documentary analysis cover this plethora of methods as we zoom into (Nicolini 2009b) local accomplishments of urban cycling, while zooming out (Nicolini, 2009b) of urban cycling to tease out the role of urban cycling within bundles of integrative practices in situ. In line with Hill et al. (2014) who argue that researchers should seek ‘novel ways to describe and track the distributed world of consumption...to attempt to capture the ongoing flow of everyday life’, his notion of rhizomatic and relational data collection and -representation is a valuable contribution in representing the ‘non-representational’ (Hill et al. 2014, p 384).

Our data analysis and representation were of a hybrid inductive nature. Inspired by recent discussion on the usefulness of ethnographic research (Woermann, 2017) and ethnographic work using a practice-based framework (Woermann and Rokka, 2015) our heterogeneous set of data was collected and then analysed following a basic practice-theory distinction between materiality, competence and meanings. According to the relational character of practices data fits into more than one category and thus overlaps occur, however to allow overlaps in writing and to describe scenes that potentially could also have happened elsewhere embodies the rhizomatic character presented above. Themes under these three main categories ‘crystallized’ (Fetterman, 2010, p.110) as we oscillated between literature, visual- and secondary data, field notes and diaries (Goulding, 2005).

Having lived on Gran Canaria for extended periods, the first author was familiar with Canarian vernacular and culture. Her proficiency in Spanish was also helpful in this regard. An initial 4-month period of fieldwork allowed her to familiarise herself with the cycling field and make contact with key informants who proved vital gatekeepers in the second period of research. During the second 8-month period of fieldwork, the first author investigated the setting in two phases (see table 1). In the first phase, she explored the field by zooming in to the local accomplishment of urban cycling. Saddling up on her own bicycle, she conducted a ‘mobile ethnography’ (Spinney, 2011, p. 161). Venturing into Las Palmas’ traffic with a video camera taped to her helmet she cycled with participants talking with them (where possible) along the way about their cycling experiences. Prior to these mobile observations she conducted in-depth interviews with participants about their cycling routines and experiences. A total of 42 participants were interviewed and observed in this way. In the second phase the author turned to secondary sources collecting a variety of documents covering issues such as regulations, traffic norms and urban planning. She also collected

netnographic data during this phase, joining a series of Facebook cycling activist groups and monitoring and contributing to the Twitter feeds of politicians, businesses and activist groups. These two phases of fieldwork overlapped significantly with the first phase of interviews and mobile ethnography running alongside the secondary data collection in phase two.

The first author quickly became part of the local urban cycling community by attending and engaging in local events (e.g. participation at the monthly Critical Mass and other cycling events in the city), and became an associate member in the activist local not-for-profit organization ‘Las Palmas en Bici’. Through this activist move, the first author gained access to important politicians and policy makers, who she subsequently interviewed and shadowed in their campaigning practices. During this second 8-month period in the field, she cycled for 164 days for an average of 35 minutes a day. She used the bicycle not only for observational purposes, but also for her own daily urban transportation. She kept a field diary of these experiences and observations, which embody a spaghetti junction of written notes, video clips, pictures and voice notes. The fieldwork adds up to 40 typed pages of diary, 846 minutes of video material, and 36 hours of taped interviews. The data set grew progressively through integrating documentary data, such as traffic regulations and historical data as well as statistics and urban planning outlines.

 INSERT TABLE 1 ABOUT HERE

Findings

When the fieldwork began, urban cycling was an almost non-existent practice in Las Palmas city. Bicycles were mostly absent from car-traffic packed streets, instead used primarily in

leisure and sportive contexts. Today the practice is slowly emerging, but still remains marginal, as Aday, a bicycle retailer, explains:

You cannot ask... 'how does it work' because it doesn't work at all. And that's how simple it is. 'Is it going well?' -What? We don't know if it's going well because it's not going at all... You CANNOT say: that's it we've arrived. We are not even on our way' (Aday)

As Aday explains, in order to understand this practice, you cannot ask how things work, but you need to adopt a different way of looking at the absences and therefore the struggles of urban cycling to emerge. At present urban cycling is only practiced by a marginalized group. The adoption of a practice-based approach allowed us to look at the complexities of absences and presences, domination and struggles. Data are presented using the categories of: material elements, competences and meanings, however this categorization needs to be seen as a fluid rather than a discrete one.

Material

The material world of urban cycling is a key element in the structure of the practice. Being a crucial part of the analysis of practices, Schatzki (2013) describes material arrangements as highly complex and intrinsically bound up with activity:

'activity inevitably transpires in a material world that it appropriates as its setting...material arrangements form immense interconnected networks through which causal processes work, affecting both the arrangements themselves and the human activity that transpires amid them.' (p.33-34).

Within this reciprocal relationship, material arrangements accommodate meaning and competences necessary for practices and are thus intimately related to these two other elements. 'Material' is sophisticated in character accounting for elements as diverse as bicycles, bodies, places and spaces as well as the infrastructure of the city. We tackle four

main issues that emerge from the data. First, we show that material arrangements of urban cycling are lacking and incomplete. Second, we demonstrate a struggle between urban cycling and other practices (such as theft, driving and policing) for the same material resources. Third, we show how this competition and the resulting lack of material arrangements negatively impacts on urban cycling's sub-practices (i.e. parking, storing), to an extent where they cannot sum up to form Schatzki's (2002) 'higher level actions...and practices'. Struggles and competition between practices hamper the 'alignment' (Bulkeley et al., 2014, p.1473) of the required elements and thus of a stable nexus of urban cycling as a practice. Fourth, we reveal how seemingly unrelated practices (those of policing and governance) operate in the background of mobility practices. These have a negative impact on cycling through omission and support thereby indirectly unsustainable ways of moving.

The lack of material arrangements: poor parking opportunities, inept bike lanes and dysfunctional public-bike-service

One of the city's recent initiatives to encourage cycling is the introduction of new bicycle lanes. However, as the literature suggests (Aldred 2013; Oldenziel and de la Bruheze 2011), this spatial segregation of bicycles seems to reinforce the ancillary role of urban cycling which as a practice does neither 'occupy [a] spatial position,' nor does it fit into 'events and activities' (Schatzki, 2001, p.19) within everyday urban traffic. Indeed, cyclists are rarely, and in some cases never, able to use the cycle lanes. As Belén, mother and beginning cyclist, comments:

'They are not connected to anything. It's totally for leisure. The lane in Mesa y Lopez is absurd. It's absurd because in good weather cafes use the terraces and put chairs in the middle of the lane. Then the bus stop is on top of it so it's like...I can't ride on this, it's not a bicycle lane! It's anything but a bicycle lane. It's there because it looks nice, because it's green, the colours and the lines, but it's absurd' (Belén)

As such bicycle lanes are typically unusable, they often end without any warning, are confusing and lack explanatory signs. It is not surprising therefore that bikes and cars often clash dangerously and cyclists feel vulnerable, their space is constantly invaded (fig 1, 2, 3 and 4). A second problem is the lack of parking possibilities:

‘Well, there aren’t many bike racks anyway. There are some, but I just lock my bike discretely to road signs, or to street lamps... I noticed a couple of years ago that there are quite a few racks down by the beach but when I need my bike in the city centre these are not helpful’ (Rosálva)

The illogical provision of an abundance of bicycle parking at the beach juxtaposed against a dearth of such facilities in the city centre sends a strong implicit message that cycling is not a serious mode of urban transportation but is best confined to the sphere of leisure. This combined lack of material arrangements hinders the practice of urban cycling from being anything other than a leisure and sports activity practiced only in areas distant from city traffic, such as parks and beach promenades (see fig. 5 and 6). The organization of the material environment then, as Canniford and Shankar (2013) also note, can seriously constrain the development of a practice.

 INSERT FIGURES 1,2,3,4,5,6 ABOUT HERE

Contemporary cycling regulations also restrict bicycle parking options. The ‘ordenanza municipal’ [the municipality regulation] requires bicycles to be parked at a bike rack within a radius of 50 meters to be ‘recogidas’ [in order, tidy] (Ayuntamiento de LPAGC, 2015a). However, finding the location of these bike racks is extremely difficult. They are scarce and do not feature in many city maps. A second regulation relates to the transport of bikes on buses. Access to buses by bikes is only granted under conditions that are difficult to fulfil.

Since Las Palmas does not have any metro or trains, buses are the only available mode of public transport and thus these restrictions further reduce the likelihood of bike usage.

Even seemingly laudable policy incentives to promote urban cycling, such as the public bicycle service ‘ByBike’ are mired in material difficulties, as Nestor, a keen cyclist and entrepreneur, illustrates:

‘Undecided about buying my third (!) bike, I see that ... ‘Bybike’, starts on the 23rd of March. It’s 9:35 am on March 23th and there is not one bike to be found in the station ‘gabinete’. I phone ByBike to see what is happening and they tell me that the heavy rain has caused water damage and since the station is not controlled remotely it is inactive and they have not yet installed the bikes. However, they also say the handy man is on his way. They apologize, I am annoyed and give up leaving it for the next day.

However, the next day is just as frustrating for Nestor as he tries to pick up a bike from another station but his access card won’t work. In his desperate attempt to cycle he even walks to a third station:

When I finally arrive, I feel hopeful and excited and -oh wow- the column recognizes my card. With a pull, I take the bicycle out. My card works!! I get on the saddle aaaaaand [pause] the bike doesn’t move. When I examine the bike, I find that its chain is loose. I try to repair it myself but the promotional covers on the wheels prohibit any access to the chainring and I don’t have the appropriate tools with me to dismantle the bike. After putting the bike back into its rack, I try to take out a new one. But this time my card is not recognized by any other column. At this point, I say “to hell with it” and take the bus because I am already late for work.’ (Nestor)

Besides the material shortcomings that Nestor reports, his ‘hellish’ experience delivers two important insights. First, cycling is a means to an end. Nestor moves in order to go to work. The practice of work dominates his ways of moving and thus makes time an important resource that cycling competes for. Our interpretation shows what Schatzki (2012) calls ‘higher level’ practices. Since work dominates Nestor’s ways of moving, which effectively means being on time at a certain destination, the scarcity of this resource compels the viability of those practices which cannot cope with such a sense of urgency to implode.

Second, if cycling cannot deliver a prompt journey and/or arrival, what are the consequences for its meaning? Leisure and free time probably require less time pressure and if Nestor did not have to go to work and instead had the time and tools to repair the bike, he might be peddling happily after all. Alas, such restraining and depriving conditions for cycling chain cycling's meaning to an image of something that can only be done in leisure contexts. In turn, they keep cycling from becoming what it should be: a possible mobility practice without ifs and or buts. While Shove et al. (2012) have shown how meanings evolve over time with a new connection between material and competence elements, our account shows how such connections are highly conflicted and can well be impossible with lacking and rudimentary resources. Hence, we do not cohere with their argument that elements are merely 'out there'. On the contrary, our data shows how material resources struggle to exist be it either because of competing practices or their simple lack or unhelpful distribution.

Competing practices and their impact: the struggle for resources and sub-practices

One of the most striking things noted by the first author on entering the field was the everyday occurrence of bicycle theft in Las Palmas. It seems bicycle theft is not only a common occurrence but that it has a significantly negative impact both, on the sub-practices of urban cycling such as parking, storing and buying bicycles, and on the supply of bicycles in the city (i.e. the bicycle market). Both cyclists and retailers complained in interviews about theft and the damage inflicted to locked bikes by opportunistic thieves. As a direct consequence, bike riders are therefore forced to purchase and use poor quality bicycles for urban transportation. Naira, a student and experienced cyclist, tells us:

'I have a rubbish bike and I wouldn't even consider buying a better one, I can leave it outside my house... I've already had a bike stolen here in Las Palmas. so I got this rubbish bike and I thought: 'why would I improve it?' if it's old they won't steal it, right?' (Naira)

Stealing exacerbates the already difficult situation of parking bikes and explains why the few bicycle racks in the city are barely used (see fig 7 and 8). While Magaudda (2011) and Arsel and Bean (2013) have shown how materiality and meanings of a practice can synergistically contribute to the advent of a new practice we note the opposite effect. Here we see a competing practice (stealing) hindering the advent of a practice -cycling- by limiting its possibilities to build a 'nexus' (Schatzki, 2012) of actions. By taking an important material resource -the bike- away, parking as one necessary action for cycling is not available as 'base' (Schatzki, 2012, p.16). If Schatzki has explained that sub practices must sum up to constitute 'higher level ones' (Schatzki, 2012, p.16), urban cycling is not able to do so because parking as one necessary sub practice is restricted. As stealing is such a common practice, bike riders do not tend to invest money in an item that might be stolen very quickly. Bicycle retailers suffer in this situation and interviews with shops, sales managers, owners and employees revealed that they couldn't survive from sales generated exclusively from urban cycling.

 INSERT FIGURES 7, 8 ABOUT HERE

While theft is clearly an issue on the island politicians routinely denied the existence of the problem. In an interview one council official observed 'our statistics don't contain many reports of theft, there isn't much bicycle theft here' (Council for Traffic and Transport). However, both observations and participants' accounts told a very different story. Participant interviews and observations on social media clearly demonstrate mistrust in police willingness to address the problem of theft. This in turn leads to a lack of reporting of the crime and to a lack of political awareness of the situation. Nestor, whose account we just read above, wrote about his stolen bike on Facebook:

‘Yes Diego, it’s the second [stolen bike]. This time I didn’t bother reporting it. I did it the last time and it was just a waste of time, just giving the police officer the opportunity to remind you once again how stupid you are. I’ll pass this time –that’s for certain. ☺ ’ (Nestor)

His quote demonstrates that cyclists would rather suffer silently than report the incident and therefore accept that bicycle theft is treated as a ‘low police priority’ (Sidebottom et al, 2009). Notice the different levels of impact. While stealing affects urban cycling directly, police-ing operates in a much subtler way -by lack or omission. Coming back to Schatzki’s (2012) action hierarchies then, police-ing surely is an important practice in the bundle of urban moving. However, of a less supportive character for cycling than expected -especially if we consider the town hall’s sustainability objective (Ayuntamiento de LPAGC, 2015b). If police-ing as an important ‘connective tissue’ (Shove et al., 2012, p.2) lacks a supportive relationship with urban cycling, then this might be one reason for its failure to thrive.

Competence

Urban cycling, in contrast to leisure and sport cycling, requires certain competences, skills and knowledge about how to behave within traffic. Certain practical understandings are necessary in order to be able to ride a bicycle alongside other vehicles. According to Schatzki, (2002) practical understanding is defined as ‘certain abilities that pertain to the actions composing a practice...execut[ing] the actions that practical intelligibility singles out’ (p. 79). By adopting this view of practical understanding, this section elaborates on the lack of practical intelligibility among urban cyclists. We find that due to the lack of traffic education and entrenched mobility norms, teleoaffective structures are restrained from emerging and moreover, the requisite organization of materiality is too unstable to allow cycling to flourish.

Lack of Practical Intelligibility and Traffic Education

Discussion with cyclists revealed that in general they had not received any cycling education regarding traffic regulations or handling their bikes within traffic. Physical peddling, in contrast, was something the majority of bike riders learned from their parents but only in areas without traffic. The Council for Traffic and Transport confirmed that the city does not mandate traffic education for cyclists. The traffic education offered to schools by the town hall and subcontractors is a voluntary workshop that takes place – if at all - on the weekends. Given the non-mandatory nature of this workshop, schools often do not take up this opportunity, as Esperanza, a teacher in primary school and newbie to cycling, explains:

‘these are voluntary workshops and we can go and participate if we want to. It isn’t a workshop over a series of days it’s just one day. The problem with it being voluntary is that the schooling agenda is already packed, so we [teachers] don’t have the time slots to integrate it (Esperanza)

Her account illustrates the difficulties of finding time to educate children on urban cycling road safety. Again, time as an important competitive resource emerges (Watson, 2013) and illustrates how professional expectations are set (Shove, 2003). If time is a resource that cycling as a voluntary school subject competes for and loses it to another subject, then once more the linkage to schooling as a potential ally cannot be established. If the previous section illustrated how urban cycling lacks a spatial position, here we have illustrated that it also lacks a temporal position and demonstrates Schatzki’s notion of the temporal-spatial (2002) spheres in which practices unfold. Bike riders confirm that cycling education was absent until some of them took the exams for their driver’s licence. The majority of them do not feel the need to update their knowledge of cycling which is often described as simple ‘common sense’. Others admit to not possessing an adequate understanding of cycling regulations. They either follow cars or merely improvise or worse, imitate the car. Aday, our bicycle retailer and assertive cyclist reveals:

'Even if you are walking as a pedestrian on the street, if you see a zebra crossing, you know where you have to cross. Even if nobody showed you or told you or you haven't gone to any School... if you see the traffic lights are red, I think it is a bit like logical and education so simple to see that the people and cars stop when it is red. It is imitation also and there is no need that anyone shows you anything. You know. If there is a STOP on the floor, I don't think it's so hard to stop at this sign. You ride, you arrive at the STOP, you watch out-is there a car coming? No? Well you go on. You have to obey to the same rules that any other vehicle obeys to. Because you are a vehicle.' (Aday)

Based on these accounts we wonder what this intuition implies –is pure common sense enough in order to know how to behave in traffic? Ideally, if everybody would obey to the traffic rules, which then can be followed through imitation, it might? Observations, however, show that right and wrong are blurred on the street. In fact, what is done in the streets is an embodied performance, which hybridizes written rules. Julio for example explained that 'a STOP sign automatically downgrades to a give way sign'. This anarchy regarding norms within traffic in which everybody 'hace lo que le de la gana' [does what one wants], blinds cyclists who are not aware of what is 'ought' to be done on paper and therefore unaware of infractions too. Schatzki (1996) described that in order for a participant to acquire competence, he needs to be exposed to the practice and states '*it is only because it is "out there" in something to which she becomes party that it is also "in her."*' (p. 106). Agostin, accountant and cycling activist, in contrast does not have 'it', the correct norms in him. In fact, despite riding his bicycle for years, he admitted in one interview that before joining the activist group he took for granted that his space to cycle is on the footpath and was shocked to find out that he had committed infractions for such a long time without corrections from any authority. Similarly, Echedey, dedicated nurse and cyclist, accounts for his riding:

'well, actually I don't know which rules apply for cycling, I mean I know the general traffic norms, yes. When I am next to a car, I follow them like a car. Now really, there are times when I need to go around something and then I take advantage of the pedestrian ROW [right of way] and I ride on. But this is not following the rules. And when I ride and see a pedestrian crossing I stop.' (Echedey)

Very few participants admit to investing their time and effort in updating their knowledge of urban cycling regulations. Doramas, student and cycling activist, is an exemplar of this mode of autodidact learning:

'I went online and searched for traffic regulations. ...I assumed that the regulations I had to know and follow were the same as those for cars... So, I assume when cycling on the roads that I just follow suit with car drivers. So if there is a STOP sign I'll brake, if there is a red traffic light I'll stop, when I turn, I need to signal' (Doramas)

Local norms however are not easily accessible and there is no official publicly available documentation. The absence of written documentation confirms the overall laissez faire attitude of the municipality towards cycling and the permissive attitude of the police towards cycling infringements. During the first author's cycling trips she frequently observed occasions in which cyclists jumped stop signs and red traffic lights in front of the police without facing any consequences. Adults with children crossing at red lights (see fig. 9), cars speeding and pedestrians crossing their way through streets putting themselves at risk are just some of the examples demonstrating the lack of norms. The very few cyclists observed trying to move in the urban setting, did not adhere to traffic rules such as stopping at signs, red traffic lights or even staying on the road. Observations show them switching from lane to footpath and vice versa and on some occasions cycling in the wrong direction.

 INSERT FIGURE 9 ABOUT HERE

This section has revealed that there is a lack of educational channels transmitting competences necessary for urban cycling. Data shows that urban cyclists are unaware of their own norms and therefore do not know how to behave in traffic. Urban cycling is trapped in its unimportant and unrecognized position, as the prevalent way of learning about traffic

behaviour is the driver's licence, which maintains the official and authorized character of driving. Therefore, urban cycling struggles to build up and own a position within traffic, especially because urban cyclists imitate the car instead of knowing their own right of way through borrowing regulations and norms from existing practices, such as car driving and walking. Urban cycling lacks the historical existence that could potentially carry and teach practical intelligibility and understanding. Buckeley et al. (2014) have argued for an alignment of three levels for a change in socio-technical systems and a sustainable transition. We show that urban cycling is far from being aligned at the element level. If Shove et al. (2012) have shown that elements are existent and available, we show that elements are not always 'out there' (Shove et al., 2012, p.123) waiting to be linked together. Instead our research emphasizes the protean and uncertain nature of practice development. The domination of one practice, in this instance, car-based practices, can however desirable a competing practice may be, easily suppress the development of another.

Meaning

This section starts with the examination of meaning as another important element of practices. Schatzki (2002) argues that 'teleoaffective structures are hierarchically ordered ends, projects, tasks...emotions and even moods' (p.80) are necessary aspects for a practice to become meaningful. As a transcendental and symbolic aspect of practices, meaning shines through material and competences and is thus an omnipresent feature. The meaning of urban cycling is both contested and the subject of political debate: what did urban cycling mean in the past? And what does it mean in the present? What is it for and how should it be done? The following sub sections will show how the development of meaning is wedged between past and present.

Between past and present: Not still a toy but not yet a vehicle

Observations of bike riders confirm what has been illustrated through the analysis of material arrangements and competences: that the learning of peddling was ‘never meant to be anything else than relaxing on a Sunday afternoon’, as Emma, a brand manager and experienced cyclist remembers:

‘[the bike was seen as] a toy for children. Every child wants a bicycle but you wouldn’t allow them to cycle in the city, not a chance. My father drove or travelled by bus. He never cycled in the city. Of my family, I am the only one who cycles in the city’ (Emma)

It is unsurprising therefore that the street was seen as belonging to the car, whereas urban cycling was only seen as legitimate at monthly events called ‘domingo en bici’ [Sunday on bikes], organized by the town hall. At these events a street within a particular district is closed off from traffic and people can cycle up and down behind barriers – separated from traffic. The extraordinary nature of these events, aimed at introducing cycling as a practice of urban moving, potentially create the opposite effect since they are experienced as a carnivalesque subversion of rules and conventions. The overall effect of this temporary subversion is indeed to reinforce the very pervasive nature of car driving as the normative mode of urban moving as Carlos, a physiotherapist and urban cyclist, explains:

‘What’s the point in doing this really? I am very annoyed by this ‘gilipollez’ [nuisance]. Really, they just bother cars big time by cutting off access and the celebration is over after a couple of hours. We had fun for a while and then what? We go back to being screamed at –that’s the reality of everyday peddling. Not really, helpful in establishing cycling as equal, is it?’ [Carlos]

The street, as participants reported, belonged to the car, since driving is the dominant mode of transport in the city. Jaime, an occasional urban cyclist, and Paulo, a not yet urban cyclist explain:

‘The islander culture is dominated by driving even if it’s from here to the next corner...here we use the car for everything’. (Jaime)

‘Like all Spaniards and especially the Canarians, I have been, since I’ve been little, used to be driven -and to drive- by car for everything’. (Paulo)

However, driving is not simply seen as the normative mode of moving, but also as a way of acquiring social status. Fabio, a retired best ager and cycling beginner remembers:

‘when the local kids turn 18 they immediately think of buying a car... we have passed this car-culture on to our children [...] When I was 18 I took my driving test, this was the big dream we had when we were little’. (Fabio)

Possessing a driving license and being able to drive a car is part of a *rite de passage* (Turner 1964) marking the end of childhood and the start of adult life. People who fail to traverse this passage are not considered ‘proper’ adults. Alejandro, a committed car driver, commented on one occasion that the bicycle is not for ‘gente normal’ [normal people] but for the ‘matadillos’ [dropouts]. Matadillos are indeed people who have failed to acquire social status and embark on a successful adult life, marking them out as outsiders. Urban cycling then, was indeed rare to see and associated with tourists as Gazmira, a regular urban cyclist, observes:

‘5 or 6 years ago, there was not one [cyclist], on the street not one...the people that rode bikes on the streets at that time were foreigners, but I tell you, this was an exception’. (Gazmira)

But it seems at present things are changing in the city if considering how Roberto, layer, cycling activist and committed urban cyclist describes the situation:

‘Little, really, I mean urban cycling, you see more bicycle users recently because ten years ago you went out with the bike on the street and could count on one hand the people with which you encounter on bikes. Very few. Now it augmented a little. Today it can be that if I stop at a traffic light, that we are three. And that is like a huge deal... but come on, I see little change. You know, regarding the car usage in the city it doesn’t compare’ (Roberto)

While the quotes above have illustrated cycling’s absence in the city’s past, Roberto’s quote highlights information about the present situation. This aspect of time deserves further consideration. Our quotes map out a perpetuation of car-driving in the past into the present.

While it is widely accepted that most practices perpetuate the past (Schatzki, 2013), which is in line with Warde's (2014) interpretation of practices following Bourdieu's 'Habitus', our quotes also tell a story about the absence of urban cycling in the city's past, being generally characterized by practitioners as something strange, and -if anything- recent. If Schatzki (2011) has postulated that 'the past does not determine the present...each present activity... is a new start' (p.6), then even the most rudimentary and marginalized activities belonging to urban cycling could constitute a change in the city. We extend Schatzki's quote and argue that even if there must not necessarily be a past of a practice (urban cycling), the past of other practices –car driving, race cycling, leisure cycling- do determine the present of urban cycling and restrict change. In other words, urban cycling struggles to write its own history because other historically anchored and well-established practices occupy resources that entail meaning. For example, consider the material resources that chain cycling to leisure and sport, or the lack of territory and unhelpful bike lanes due to indecisive policing and driving.

Another interesting finding from the data revolves around the meanings of urban cycling in the campaigns of political parties. Here some cycling narratives hinged on the benefits of sustainability and increased tourism but never on the use of a bicycle for commuting. The governing party 'Partido Popular' argued for 'menos humos, mas bicicletas' [more bicycles, less smog], whereas the rival parties 'PSOE' and 'NC' claimed 'menos bicis, mas trabajo' [less bicycles, more work]. This second campaign is probably a critique of the Partido Popular's focus on cycling i.e. that they should focus less on cycling and more on economic policies surrounding employment and the economy. In this second narrative cycling is undoubtedly being equated with a lack of progress, development, and modernity (see fig. 10,11 and 12).

 INSERT FIGURES 10, 11 and 12 ABOUT HERE

Urban cycling then seems to be harnessed within campaigning practices in order to win votes, as opposed to achieving the overall objective of making urban life more sustainable.

All these accounts reveal how important it is to understand the ends, purposes and emotions-Schatzki's teleoaffective structures (Schatzki, 1996) - of urban practices. For example, the execution of policy programmes underlies the teleoaffective chains of campaigning practices: winning the election through pleasing different communities. Similarly, at the level of the individual the teleoaffective structures of urban moving inject and construct identity as they inscribe that being a real 'isleño' is preferring the car and excluding the bicycle for urban transportation. They illustrate how existing meanings associated with car driving and sportive cycling have formed a constituent part of participants' teleoaffective structures since childhood. Teleoaffective structures of these practices shape the practical intelligibility of such practices or 'what makes sense to people to do' (Schatzki, 2002, p.81). Consequently, existing practices both teach participants how to move in urban surroundings and organize the subsequent consumption of car and bicycle for different occasions. As Schatzki frames it: 'activity is governed by practical intelligibility, which is itself determined by mental conditions, many of which are formed during the process of learning and being trained and instructed to carry on the practices involved.' (p. 81). That urban cycling does not possess a common conception of its own is most obvious when considering practitioners' knowledge acquisition. We have highlighted how the 'meaning' of urban cycling is far from established. Our data has shown how meaning is trapped within materialized chains between two dominant views about what cycling symbolised in the past and an imposed view on what cycling is supposed to symbolise in the future, which causes struggles in the present.

Discussion

Our discussion is organised around the two key questions posed at the start of this paper: *Why might sustainable practices (such as urban cycling) fail to thrive?* and *What are the implications of a practice-based approach for the design of policy surrounding sustainable consumption?*

Why might sustainable practices (such as urban cycling) fail to thrive?

In line with other practice studies (Woermann and Rokkas, 2015) our findings show that the relationships between elements *within* a practice are vital to the way in which that practice proceeds. Just as Shove et al. (2012) find in the case of car driving, elements in a practice mutually influence and reinforce each other (see also Magaudda, 2011), we found that in the case of an emerging practice, elements can equally hinder and restrict each other. That is to say, an internal conflict of one element creates conflicts in between other elements. If one element is hindered, the other elements cannot establish either because the necessary relationship cannot be formed. For example, we have demonstrated a reciprocal relationship between a lack of material features and the lack of meaning for urban cycling. Numerous bicycle parking facilities are located at leisure sites whereas facilities in the city centre are non-existent. As scholars in industrial design highlight, the way objects (in our case also infrastructure) are planned is often done with a simplistic perspective product-user interaction, without considering the practice(s) and bundle(s) of practices in which such objects will be included (Kuijer et al. 2013). This is clearly the case of the infrastructure planned in Las Palmas. By simply looking at the product-user interaction, urban cycling is restrained in its evolution by the material element of bicycle parking. This empirically

supports Schatzki's (2001) argument that 'teleological chains [are] tied to specific...practices' (p.82), since practices' ends, purposes, emotions are only grasped through performing them. This is in contrast to the dominant belief that symbolic meanings are tied to and constructed by the consumer as phenomenological accounts suggest in mainstream consumer research (Askegaard and Linnet, 2011). Findings have also shown how the three elements of material, competence and meaning are entirely relational in character. Each element extends and reveals detail and information about the other. For example, as we examined the material element of cycling we learned something about competence and meaning, and as we examined competence we learned something about materials and meaning, and so on.

Given the above how then should practices be usefully studied? Firstly, it is crucial to look at the existence of the various elements of a practice and their relationships *in situ*. Not every practice necessarily has a history in which elements have fallen in and out of integration but rather –and in particular- emerging practices rely on elements that are established *in situ* from scratch. This is evident in our findings showing the weakness of some of the key elements of a practice including materiality and competence.

Secondly our study looks at bundles of practices or relations *between* as opposed to solely *within* practices. Studying more than one practice in isolation provides an in-depth account of how some practices thrive and come to dominate others. In doing so, we extend studies such as Canniford and Shankar (2013), showing the way in which surfers' experiences of nature are constituted by assemblages and alignments of discourses, technologies and material geographies. While we are not centrally concerned with the way consumers organise their own experiences (and thus their agency) this work does shed light on the central role of the

material (and its alignment with other elements – see also Woermann and Rokka, 2015) in dictating the way in which a practice might proceed. In illustrating a competitive and hostile relationship between a plethora of practices that each entail materials, competences and meanings our findings show a more complex understanding of alignments between elements. As Nicolini and Monteiro (2017) argue it is the study ‘under which...conditions all these elements cohere, what tensions they harbour, what sort of practice...results from their combination’ (p. 118), which reveals why some practices thrive and others do not. Especially because our data reveals what *is not* in a practice bundle or *is struggling* to be embedded in a bundle, we advance a theoretical understanding of the attitude-behaviour gap (Black, 2010). Acknowledging that consumption cannot happen if the practice under study cannot thrive due to lacking resources and competing practices, generates a more nuanced understanding why people do not consume sustainably although they want to. Analysing a bundle rather than a single practice has demonstrated the hierarchical nature of relations between practices, the dominance of some practices and the marginality of others. By taking Shove’s et al. (2012) notion of the relationship between elements, and how practices might develop over time, we have shown how such development can be severely hindered. Our data has shown that the ‘alignment’ (Bulkeley et al., 2014) of practice elements is rich in conflict and offers starting points for dynamics of change. While such a conflict-focused view on practice dynamics seems most fruitful to understand why sustainable practices are not successful in thriving, the politics of practices and power relations between them has been largely absent from discussion to date.

What are the implications of a practice-based approach for the design of policy surrounding sustainable consumption?

Willhite et al. (2000) argue that if social scientists want to make an impact on policy making, which is dominated by scholars from technical disciplines, then they need to show how individuals do not simply consume ‘energy’, but they do consume energy services. Provided by freezers, washing machines, ovens, and indeed cars, such services fulfil cultural expectations of how everyday lives should be conducted:

Devices convert energy into services; people are interested in services, not energy. So what is needed is a social science of energy service consumption, something much broader than a science of energy behaviour (2000, p. 115)

As eloquently illustrated by Shove (2003, p. 198) a broader approach consists of ‘thinking systematically about how expectations are formed as well as about what they are’. In our case looking systematically at urban cycling implies understanding how cycling is interlinked with other practices including working, schooling, using public transport and more generally ‘being and moving around’ in the urban area. Showing how such practices are hierarchically linked together into bundles, reveals which practice indeed is dominant and in turn how expectations of such a dominant practice come to dominate the organisation of urban moving. For example, gleaned through our data, security and comfort have emerged as expectations that neither private nor public cycling services are able to accommodate, and hence urban cycling comes to be marginalised, while other unsustainable practices such as car driving, come to dominate.

Applying this systematic thinking to policy making requires a key shift in policy planning, taking practices and their bundles as the units of analysis. As a result, policy would in best practices recognise that consumers are ‘locked’ (Newell et al., 2015, p.537) into unsustainable patterns and that its principal activity is to unlock such patterns changing practice arrangements. Based on our findings, we echo Shove et al.’s (2012) argument that ‘policy initiatives to promote more sustainable ways of life could and should be rooted in an

understanding of the elements ... and of the connective tissue that holds them together' (p.2). While Shove et al. (2012) refer to an existent connective tissue, the connective tissue, in our case, is non-existent. However, revealing an absence of such connective tissue shows conflicts of non-consumption, which 'should' be resolved by policy makers making such connection possible. In looking at some of these conflicts between practices and their elements we can attempt an interpretation of the conditions that hinder urban cycling from thriving. For example, the clash between stealing and parking has shown a range of consequences affecting cycling which clash with the expectations of security and comfort dominating urban moving and fuel the unintentional de-marketing of bicycles as well as – consequently– its market.

These findings point towards the possibility that markets are influenced by practice constellations and their relationships not by consumers and merchants alone. As Steward (2015) puts it 'there is something more systemic at work' (p. 2) that leads to the failure of the bicycle market in the city. As clashes between practices have wider impact on market behaviour, it is unlikely that they will be resolved by merely '[providing] consumers...with more or different information' (Steward, 2015, p. 2). The absence of bike racks, bike lanes and access to public places and public transport, as well as the practice of stealing are outside of consumers' and businesses' reach and require urban planning and policing practices to be aligned with urban cycling. In responding to Steward's (2015) call that 'sound policy making requires information about this complexity [because] much policy research begins with rather simplistic assumptions' (p.2), the present study indeed foregrounds a complex vision as to why people do not use the bicycle for urban transportation –or to put it differently– fail to resist car consumption.

Further our findings reveal a discrepancy between what 'ought to be' in policy and 'what is'. The elephant in the room are the 'governance traps' (Newell et al., 2015) in which policy

makers are conflicted between seeing sustainability as the ultimate goal to which incentives should be aligned in order to encourage sustainable ways of life; or using sustainability as a marketing claim for the sake of increased votes. As we have seen that teleoaffective chains are tied to practices, the ends, aims and purposes of campaigning practices, is winning elections. Hence, policy incentives themselves are used to achieve this end and an increase in urban cycling is not considered as an ultimate objective to be achieved.

Resulting from the above, we argue that practice-based research offers an important tool for ‘policy analysis’ (Steward, 2014, p. 2). Rather than just describing policies and the phenomenon under study (problem), practice-based research clusters regulations, social movements, groups of interests, such as activist and lobbyists relevant for policy (processes), policy incentives (procedures) and outcomes or ‘standards’ (protocols) and critically explores their relationships to each other. In doing so, it reveals hierarchical positions, conflicts and harmonies between practices that determine not only the marginality or dominance of consumption but also the effectiveness of policy incentives. Hence, with special attention to time, space and activity practice-based research embraces the notion that ‘policies evolve over time and the process by which that evolution occurs is important to understand those policies’ (Stewards, 2014, p.2). Indeed, as seen from our empirical account, practice-based research provides a richer understanding of policies as it reveals conflicts between policy practices, lobbying, campaigning and urban cycling. Hence, at ‘the intersection of public policy and marketing’ (Steward, 2014, p.1) we believe that practice-based research is an important new way of approaching sustainable consumption in order to ‘make the full link to policy’ (Steward, 2014, p.2).

While we insist that there is no quick fix to deeply ruling unsustainable practice constellations, we offer a couple of ‘entry’-remedies. First, we echo that niche experiments are means through which marginalized sustainable practices and socio-technical transitions might take place (Bulkeley et al. 2014, Quitzau et al., 2012). Although our example is a story of policy intervention gone wrong, niche experiments offer potentially a platform for negotiation of expectations, transitions of socio-technical systems and thus, we believe, a platform for a realignment of practices. Although, too, experiments might become a place of conflicts amongst actors with different interests; local niche planning as illustrated by Quitzau et al. (2012, p. 1050) has shown that ‘the planning process is positioned as a vehicle of change, in accordance with transformative ideas of spatial planning’. As such policy makers are supposed to express a clear intention to use niche experiments to make sustainable transitions, shaping existing practices with the support of using technological innovation. Our data has shown, however, that clear policy expressions are not enough. Political lip service result in indecisive half-hearted interventions and ‘obdurate materialities’ (Phipps and Ozanne, 2017) of unsustainable practices. If political will is necessary to defend the feasibility of such experiments, the challenge is converting competitive and depriving relationships of practices into supportive and nourishing relationships. This requires the opposite of accommodating different interests, that is, ‘staying on the pro-sustainability course’.

Second, existing attempts to disrupt (such as ‘domingo en bici’ [Sunday on bikes]) have only served to emphasise car driving as the norm and the ‘exceptional’ nature of bicycles in the street. We suggest that policy incentives deliberately target a series of elements in tandem in order to forge new connections within urban cycling. Bikes and public transport might even be shaped (both materially and discursively) as the most ‘convenient’ way to move in order to access central points. This might best be paired with a stronger restriction and access into

the city centre for cars, more pedestrian zones and a defence of bicycle lanes. An intervention for ‘meaning’ would be to introduce sustainability much more concretely into the discourse of the city in order to highlight the importance of cycling to the overall improvement of carbon footprints and pollution and to use sustainable endorsement, i.e. bicycle brands for cultural events and concerts –instead of car brands. Looking at an intervention for competence, we suggest that urban cycling needs to be included in schooling practices. It is thus not enough to target urban cycling as single practice but, as discussed above, to alter the constellation of the practice bundle of which urban cycling is surrounded.

Conclusion

As much of the existing debate on anti-consumption is framed in terms of the attitude – behaviour gap, our practice based approach offers some insight into what may exist within this gap – the habitual and routine nature of everyday life. As we discuss above the teleoaffective structures of practices shape the practical intelligibility of such practices or ‘what makes sense to people to do’ (Schatzki, 2002, p.81). Consequently, it is through engagement in practices that participants make sense of moving in urban surroundings. This is a significant contribution and corrective to some existing studies of non-participation in cycling which views it as located within individual identity as steered by personal preference and free choice. If (as our practice approach shows) identity is located rather within existing urban practices, then individual agency and choice is much more constrained than hitherto theorised. This view gives importance to existing habit and routine as inscribed within practice (in all of its material complexities) rather than individual identity.

This view foregrounds absence as much as presence asking questions regarding why certain practices and their elements are not (yet) dominant in our social world. Indeed this analysis of absence ‘may be of equal importance to understanding consumer lifestyles and consumer

culture overall' (Chatzidakis and Lee, 2012, p. 198), since it shows that some sustainable practices don't happen because of barriers that current consumer centred ontologies often miss - that is the nonreflexive, habit based, routine world of everyday life. Not only this, but these routines themselves are located within, and made sense of through practices which then themselves set the terms for the way in which social life proceeds. Finally, our focus on bundles of practices and the relations of practices within these bundles allows us to explore the *politics of practices*. Our contribution here is to spell out that for a practice to survive and grow it requires other supporting practices to be well developed. Therefore, what we see is a situation of critical mass, where enough practises come together to support one another and create strong synergies, only then can a practice thrive. Equally practices that have strong synergistic relations in place are very difficult to contest.

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¹ Critical Mass is a global social movement involving direct action events where cyclists meet at a set time and location to cycle together through city streets, thus reclaiming them from motorists (Blickstein and Hanson, 2001; Carlsson, 2002, Furness, 2007)

TABLE 1

| Time | Research phase | Research Methods |
|----------------------------|-----------------|--|
| May 2012 – September 2012 | Familiarisation | <ul style="list-style-type: none"> • Recruitment and initial observation / ad hoc conversations and interviews • Mobile ethnography (participant observation and 24 hours cycling for private transportation) • 12 In-depth interviews with practitioners • 1 In-depth interview with politician • Riding with the monthly Critical Mass • On-going graphic/audio-visual observation, field notes and diary (voice, video- and photographic recording of Las Palmas' traffic) |
| December 2014 – March 2014 | Phase One | <ul style="list-style-type: none"> • Refamiliarisation with the field, recruitment and initial observation / ad hoc conversations and interviews • Mobile ethnography with 30 practitioners (participant observation and 24/7 cycling for private transportation) • Joining and participating in the local pro-cycling activist-NGO • In-depth interviews with (30) practitioners • Attending political events |
| March 2014- September 2015 | Phase Two | <ul style="list-style-type: none"> • Riding with the monthly Critical Mass • In-depth interviews with (3) political parties • On-going graphic/audio-visual observation, field notes and diary (voice, video- and photographic recording of Las Palmas' traffic) • In-depth interviews with (6) bicycle retailers (shop owners and employees) • Accompanying public bicycle repairing service on their shift • Documentation of municipal traffic regulations in regard to cycling and overall, brochures of explanatory norms and rules for cycling, regulations of public transport in regard to onboard bicycles • Documentation of urban planning outlines and strategies • Nethnographic screening of Social Media/Apps • Tours with the local police-on-bicycles • Documentation of electoral campaigning (newspaper articles, viral spots and other video material, interviews and statements) • Documentation of car lobbying (newspaper, sponsorship, clubs and presentations) • In-depth interviews with bicycle retailers (shop owners and employees) • Accompanying public bicycle repairing service in their shift |

